

REMARKS

Applicants acknowledge receipt of the final Office action dated December 26, 2007. In this Amendment, claim 3 is cancelled and claims 29-32 are newly added. Claims 1, 2, 4-14 and 16-32 will be pending in the application upon entry of this paper. Favorable consideration and allowance of the pending claims are respectfully requested.

I. Claim Objections

Claim 3 is objected to under 37 CFR 1.75(c) as being of improper dependent form. Claim 3 is cancelled herein. Reconsideration and withdrawal of this objection is respectfully requested.

II. Claim Rejections: 35 U.S.C. § 102

Pending claims 1, 2, 4-14, 16-24, and 28 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Wood (U.S. 4,454,824). Applicants disagree for at least the following reasons, and respectfully request reconsideration and withdrawal of the rejection of these claims.

A. Claim 1

Claim 1, which is amended herein, is generally directed toward a safety-fastener to be secured by fastening. The safety-fastener comprises a threaded tip having a hollow channel defined at least partly therein, a rod having a hollow channel defined at least partly therein, and a locking element housed at least partly within the hollow channel of the threaded tip and/or the hollow channel of the rod. The threaded tip and the rod are interconnected in a joint that, among other things, inhibits axial movement of the rod relative to the threaded tip. The channel of the threaded tip is generally aligned with the channel of the rod at the joint such that the locking element can move within the channels between the threaded tip and the rod. The joint is locked by the insertion of the locking element into the joint and into a rotationally locking engagement at least partly within the channel of the rod and at least partly within the channel of the threaded tip.

Wood does not disclose, at the least, (1) both a threaded tip having a hollow channel and a rod having a hollow channel, where a locking element is received within the channels and is moveable within the channels relative to the threaded tip and the rod; (2) the threaded tip and the rod being interconnected at a joint that inhibits axial movement of the rod relative to the threaded tip; and (3) the joint having a locked state in which the locking element is disposed at least partly within the channel of the threaded tip and at least partly within the channel of the rod in rotationally locking engagement with the threaded tip and the rod to allow transmission of rotational movement from the rod to the threaded tip.

As described in Applicants' prior Response (dated October 3, 2007), Wood discloses a beach locker that can be secured into sand at a beach to store a beachgoer's valuables against theft. The beach locker includes a locker body 10 positioned above a solid shaft 20. A drive member 42 is coupled to the locker body 10 and is configured to move vertically upward and downward relative to the locker body 10 (and shaft 20) to selectively engage and disengage the shaft 20 (Wood, column 2, lines 53-55). For example, when the drive member 42 is located vertically upward relative to the locker body 10 and shaft 20 (see, Wood, Fig. 4), the drive member 42 is disengaged from the shaft 20 and any rotation of the locker body 10 (and drive member 42) occurs independent of the shaft 20 (Wood, column 2, lines 45-49). When the drive member 42 is moved vertically downward and into the locker body 10 (see, Wood, Fig. 6), a slot 40 in the drive member 42 moves into cooperation with a pin 34 of the shaft 20 and rotation of the locker body 10 (and drive member 42) conjointly rotates the shaft 20 (and auger 22, for example, for inserting/removing the beach locker from the sand, etc.).

First, Wood does not disclose, at the least, both a threaded tip having a hollow channel and a rod having a hollow channel, where a locking element is received within the channels and is moveable within the channels relative to the threaded tip and the rod (as generally recited in Applicants' claim 1). At most in Wood, the drive member 42 (which is related to a rod in the final Office action (see, Final Office Action, page 2)) includes a void 38 having the slot 40 that is configured to receive the pin 36 of the shaft 20 for coupling the drive member 42 to the shaft 20 (with part of the shaft 20 being received into the drive member's void 38). But the auger 22 (which is related to a

threaded tip in the final Office action (see, Final Office Action, page 2) does not include a hollow channel, for example, for receiving a locking element into the channel.

In the “Response to Arguments” section of the final Office action, the Office states with regard to prior claim 15 (now cancelled) that “the rod and the threaded tip comprise a hollow channel that houses the locking element (the rod is hollow; figure 6), where in figure 6 it is clear that the locking element (36 and 40) are housed in a hollow channel of the rod.” (Final Office Action, pages 6-7). This statement only indicates that Wood may disclose in Fig. 6 a rod having a hollow channel. The Office provides no indication of where Wood discloses a threaded tip having a hollow channel capable of housing a locking element. Applicants respectfully request an indication of where this feature is shown in Wood if this rejection is maintained.

Second, Wood does not disclose, at the least, a threaded tip and a rod being interconnected at a joint that inhibits axial movement of the rod relative to the threaded tip (as generally recited in Applicants’ claim 1). In Wood, the drive member 42 is selectively engageable with the shaft 20 within a boss 18 (which is related to a joint in the final Office action (see, Final Office Action, page 2)). The drive member 42 can move axially within the boss 18 relative to the shaft 20 (and auger 22) for selectively engaging and disengaging the shaft 20 (see, Wood, column 2, lines 45-48 and 53-55); the boss 18 does not inhibit axial movement of the drive member 42 relative to the shaft 20 and auger 22. In fact, such axial movement of a rod relative to a threaded tip in a safety-fastener would render the safety-fastener unsuitable for use because such movement of the rod would result in ineffective transfer of axial forces to the tip (to press against an outer surface of a body into which the fastener is driven).

Finally, Wood does not disclose, at the least, a joint having a locked state in which a locking element is disposed at least partly within a channel of a threaded tip and at least partly within a channel of a rod in rotationally locking engagement with the threaded tip and the rod to allow transmission of rotational movement from the rod to the threaded tip (as generally recited in Applicants’ claim 1). In Wood, the pin 36 of the shaft 20 is received within the slot 40 of the drive member 42 to allow conjoint rotation of the drive member 42 with the shaft 20 (and auger 22). At most, this interconnection of the pin 36 and slot 40 (which together are related to a locking element in the final

Office action (see, final Office action, page 6 and 7)) occurs within the void 38 of the drive member 4. But no part of the pin 36 and slot 40 may be viewed as being received within a hollow channel of the auger 22 (or the shaft 20) (as stated above, neither the auger 22 nor the shaft 20 even include a hollow channel).

For at least the foregoing reasons, Applicants submit that amended claim 1 is novel and patentable over the cited references, including Wood. Pending claims 2, 4-14, and 16-21, which depend from claim 1, are submitted to be novel and patentable over the cited references, including Wood, for at least the same reasons set forth above with respect to claim 1. In addition, pending claims 2, 4-14, and 16-21 are believed to be further patentably distinguishable because the cited references do not disclose, teach, or suggest the additional features required by them in combination with the other features recited in independent claim 1 from which they depend. Applicants respectfully request reconsideration and withdrawal of the rejection of pending claims 1, 2, 4-14, and 16-21 under 35 U.S.C. § 102(b).

Claim 6, as amended, depends from claim 1 and is further submitted as patentable over the cited references, including Wood, because the cited references do not disclose that the joint is shifted from the locked to the unlocked state and vice versa by the removal of the locking element from the joint. The Office relates Wood's pin 36 and slot 40 to a locking element and Wood's vertical boss 18 to a joint (see, Final Office Action, page 6 and 7). But neither the pin 36 nor the slot 40 is removed from the vertical boss 18 during operation/use of the beach locker. Moreover, the Office refers to column 2, lines 40-48 of Wood as disclosing a joint locked by the insertion of a locking element (36 and 40) into a rotationally locking engagement in a rod and a threaded tip. But here, Wood merely states that the pin 36 "selectably cooperates with a void 38 having a slot 40 defined in the bottom of drive member 42. The void fits over the top end of the shaft, with the slot 40 selectably engaging or freeing the pin 36. As can be seen in FIGS. 4 and 6, when the drive member 42 is raised to the position shown in FIG. 4, it is free of the shaft by virtue of the pin 36 and slot 40 being disengaged." (Wood, column 1, lines 45-47). Wood does not state that either the pin 36 or the slot 40 is removed from the vertical boss 18 during operation/use.

Claim 7, as amended, depends from claim 1 and is further submitted as patentable over the cited references, including Wood, because the cited references do not disclose that the joint is shifted from the locked state to the unlocked state by irreversible breaking of the locking element within the joint. In an example embodiment of Applicants' safety-fastener (see, e.g., Figs. 8A and 8B of Applicants' filed application, etc.), a locking element may be positioned into a rotationally locking engagement within a channel of a threaded tip and within a channel of a rod to allow transmission of rotational movement from the rod to the threaded tip. With the locking element in this position, the safety-fastener may be installed into a medium by rotating the rod and threaded tip. As the safety-fastener is moved into the medium, frictional forces between the safety-fastener and the medium increase such that increased rotational forces must be applied to the rod to overcome the frictional forces. When the frictional forces become large enough, the increased rotational forces applied to the rod will be greater than the locking element can support, and the locking element will irreversibly break within the safety-fastener and effectively disengage the threaded tip from the rod.

In the "Response to Arguments" section of the final Office action, the Office refers to column 1, line 66 to column 2, line 4 of Wood as disclosing shifting a joint from a locked state to an unlocked state by irreversible breaking of the locking element.¹ But here, Wood merely discusses locking the beach locker to prevent a thief from stealing it (i.e., using a padlock to hold the drive member from engaging the shaft). Wood does not discuss shifting a joint from a locked state (allowing transmission of rotational movement from a rod to a threaded tip) to an unlocked state (preventing transmission of rotational movement from the rod to the threaded tip). Wood in fact makes no mention of irreversibly breaking a locking element (e.g., breaking the pin 36 and slot 40 to prevent transmission of rotational movement from the drive member 42 to the shaft 20, etc.) in order to shift a joint from a locked state to an unlocked state. At most Wood discloses that a thief would have to break a padlock 52 to move a drive member 42 into engagement with a shaft 20 in order to allowing transmission of rotational movement

¹ Wood states here that "[w]hen the lid is put on the locker and the drive member pulled up through the lid and secured with a padlock, it is impossible to engage the driving member onto the pin in the top of the shaft, and thus the locker free-wheels aimlessly on the shaft without accomplishing the disengagement of the auger if a thief attempts to remove the entire mechanism."

from the drive member 42 to the shaft 20 to steal the beach locker. Breaking the padlock 52, however, is not analogous to breaking a locking element, as required by Applicants' claim 7.

B. Claim 22

Claim 22, which is amended herein, is generally directed toward a lock safety-fastener. The lock safety-fastener comprises a fastener and a lock wherein the fastener includes an insertion-region which can be used for attachment into a solid material, and a lock-accepting region which protrudes from the solid material. The attachment and locking of the lock to the lock-accepting region allows the lock to rotate freely around the lock-accepting region in its locked state thereby significantly hindering the possibility for loosening the fastener. The attachment of the lock to the lock-accepting region of the fastener includes inserting the lock-accepting region into the lock such that the lock substantially covers the lock-accepting region.

In the final Office action, the Office relates the container 12 in Wood to a lock-accepting region, and the padlock 52 in Wood to a lock (see, Final Office Action, pages 4 and 5). But Wood's container 12 is not inserted into the padlock 52; and the padlock 52 does not substantially cover the container 12, as now generally required by Applicants' amended claim 22.

For at least the foregoing reasons, Applicants submit that amended claim 22 is novel and patentable over the cited references, including Wood. Pending claims 23, 24, and 28, which depend from claim 22, are submitted to be novel and patentable over the cited references, including Wood, for at least the same reasons set forth above with respect to claim 22. In addition, pending claims 23, 24, and 28 are believed to be further patentably distinguishable because the cited references do not disclose, teach, or suggest the additional features required by them in combination with the other features recited in independent claim 22 from which they depend. Applicants respectfully request reconsideration and withdrawal of the rejection of pending claims 22-24 and 28 under 35 U.S.C. § 102(b).

III. Claim Rejections: 35 U.S.C. § 103

Pending claims 25-27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wood in view of Williams (U.S. 3,817,063). Pending claims 25-27 depend from claim 22, which Applicants submit as patentable for at least the reasons stated above, and are therefore submitted as patentable for at least the same reasons as stated for claim 22. In addition, pending claims 25-27 are believed to be further patentably distinguishable because the cited references do not disclose, teach, or suggest the additional features required by them in combination with the other features recited in independent claim 22 from which they depend. Reconsideration and withdrawal of the rejection of pending claims 25-27 under 35 U.S.C. § 103(a) are respectfully requested.

IV. New Claims 29-32

New claims 29-32 are supported by the application as originally filed. No new matter is introduced by the addition of these claims.

Claims 29 and 30 depend from claim 1, which Applicants believe to be patentable for the above stated reasons. As such, Applicants believe that new dependent claims 29 and 30 are also patentable at least by virtue of their dependence from independent claim 1. In addition, claims 29 and 30 are believed to be patentably distinguishable over the cited references because the cited references do not anticipate or make obvious the additional features of these claims (in combination with features recited in claim 1 from which they depend).

For example, the cited references do not anticipate or make obvious the features of claim 29, including that the joint is unlocked by movement of the locking element out of the joint and out of rotationally locking engagement with at least one of the rod and the threaded tip. And the cited references do not anticipate or make obvious the features of claim 30, including that the locking element frictionally engages the rod and the threaded tip at least partly within the channel of the rod and at least partly within the channel of the threaded tip to lock the joint.

New independent claim 31 is directed toward a fastener including a body having threads extending at least partly around the body and a channel extending at least partly through the body; and a head coupled to the body and having a channel

extending at least partly through the head. The channel of the head is generally aligned with the channel of the body and includes a cross-sectional shape substantially similar to a cross-sectional shape of the channel of the body. A locking element is positionable at least partly within the channel of the threaded tip and at least partly within the channel of the head. The head is coupled to the body at a joint that inhibits axial movement of the head relative to the body. The joint allows transmission of rotational movement from the head to the body in a locked state and inhibits transmission of rotational movement from the head to the body in an unlocked state. The locking element is moveable within the channels of the body and the head to allow shifting of the joint between the locked state and the unlocked state. In the locked state of the joint, the locking element is disposed at least partly within the channel of the body and at least partly within the channel of the head in engagement with both the body and the head so that rotational movement of the head is transmitted to the body. In the unlocked state of the joint, the locking element is disposed out of engagement with at least one of the body and the head so that rotational movement of the head is not transmitted to the body. Applicants submit that new claim 31 is patentable over the cited references, including Wood, because the cited references fail to disclose or make obvious all of the features of new claim 31.

Claim 32 depends from claim 31, which Applicants believe to be patentable as stated above. As such, Applicants believe that new dependent claim 32 is also patentable at least by virtue of its dependence from independent claim 31. In addition, claim 32 is believed to be patentably distinguishable over the cited references because the cited references do not anticipate or make obvious the additional features of these claims (in combination with features recited in claim 31 from which it depends). For example, the cited references do not anticipate or make obvious the features of claim 32, including that in the unlocked state of the joint the locking element is disposed out of the channel of the head and substantially within the channel of the body.

V. Conclusion

In view of the above remarks, Applicants respectfully submit that each of the rejections set forth in the Office action has been overcome, placing the present application in condition for allowance. A notice to that effect is respectfully requested.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John A. Castellano at the telephone number of the undersigned below.

Applicants hereby petition under the provisions of 37 C.F.R. § 1.136(a) for an extension of time in which to respond to the outstanding Office Action and includes a fee as set forth in 37 C.F.R. § 1.17(a) with this response for such extension of time.

It is believed that the correct fees due are included with this filing. If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. **08-0750** for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, Dickey, & PIERCE, P.L.C.

By

John A. Castellano, Reg. No. 35,094
P.O. Box 8910
Reston, Virginia 20195
(703) 668-8000

JAC/BGP